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GENTLE TEACHING AND APPLIED BEHAVIOR ANALYSIS: A CRITICAL REVIEW

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In recent years, there has been a growing controversy surrounding gentle teaching. This paper explores the nature of this controversy with particular reference to the relationship between gentle teaching and applied behavior analysis. Advantages and disadvantages of this approach are discussed, and it is suggested that gentle teaching and applied behavior analysis need not be regarded as mutually exclusive approaches to working with persons with mental retardation.

DESCRIPTORS: gentle teaching, applied behavior analysis, nonaversive interventions

In recent years there has been an intense debate concerning the ethical, moral, legal, and philosophical issues concerning the use of aversive procedures in the treatment of persons with mental retardation who display challenging behavior. The aversives issue continues to engender some of the most contentious and emotional debates of any aspect of service provision for people with mental retardation (for reviews, see Butterfield, 1990; Guess, Helmstetter, Turnbull, & Knowlton, 1986; Guess, Turnbull, & Helmstetter, 1990; Mulick, 1990; Mulick & Kedesdy, 1988; Repp & Singh, 1990). Commenting on this debate, Coe and Matson (1990) stated that "given the high stakes, the extent of rhetoric and misinformation without substantiating objective data is dismaying" (p. 466).

In particular, one approach to the reduction of inappropriate behavior has become characterized as representing the definitive nonaversive approach. This procedure is known as gentle teaching (GT), and is an approach around which there has been a growing international controversy, particularly in reference to the relationship between GT and applied behavior analysis. The debate between the proponents of GT and behavior analysis has been marked by intensity of passion and by the unhelpful polarization of the discussion. The proponents of GT have caricatured the behavioral approach as "sinful" (Conneally, 1989, p. 5), as a "culture of death" (Brandon, 1989a, p. 14) and have likened the approach to that of deliberate torture (McGee, Menolascino, Hobbs, & Menousek, 1987). On the other hand, criticism has been directed both at the GT movement itself (Mudford, 1985; Turnbull, 1990) and at McGee personally (Linscheid, Meinhold, & Mulick, 1990). Barrera and Teodoro (1990) have summarized the position as follows:

> We have sneered at gentle teaching's ungentle criticisms of behaviorism and of the scientific principles of lawfully determined behavior, and we have shunned it as biased, unscientific, and naive. We also have conducted revisionistic armchair analysis of gentle teaching, dismissing it more often than not as a mere recombinant of positive reinforcement, manual guidance, prompting, and extinction. (p. 199)

This paper reviews the relationship between GT and applied behavior analysis from a wide perspective and draws conclusions on the basis of the available evidence concerning the effectiveness of GT and the impact it has had upon the field of mental retardation.

BACKGROUND

Definition

Gentle teaching can be defined as a nonaversive method of reducing challenging behavior that aims to teach bonding and interdependence through gen-

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tleness, respect, and solidarity. Emphasis is placed on the importance of unconditional valuing in the caregiving and therapeutic process.

Gentle teaching has its origins in the work of several professionals based at the University of Nebraska in the mid-1980s. The term *gentle teaching* first appeared in professional journals in 1985 (McGee, 1985a, 1985b, 1985c), but the ideas behind the approach can be traced to earlier publications by the same authors. In 1983 Menolascino and McGee published a paper in *The Journal of Psychiatric Treatment and Evaluation* that probably marks the first clear expression of these ideas. Earlier papers in the late 1970s and early 1980s had dealt with the medical and emotional aspects of the care of people with autism and mental retardation (McGee, 1979; McGee & Hitzing, 1978; Menolascino & Egger, 1978; Menolascino & McGee, 1981), but the 1983 paper was the first to suggest that an emphasis on the posture or attitude of the caregiver and on the importance of "human engagement" was central to the effective reduction of challenging behavior (Menolascino & McGee, 1983).

In 1985, Casey, McGee, Stark, and Menolascino published a book detailing the provision of a community-based service system in Omaha in which the authors viewed the development of challenging behavior as a communicative message in response to a world that is perceived as meaningless and bewildering (Casey et al., 1985). Once again, however, the term *gentle teaching* was not used. In the same year, a series of short papers appeared in *Mental Handicap in New Zealand* written by John McGee (1985a, 1985b, 1985c). This represented the first use of the term and the first clear description of the specific techniques for working with individual learners.

In 1987, two publications appeared which further refined the ideas underlying GT. McGee, Menousek, and Hobbs contributed a chapter to a book on community integration (Taylor, Bicker, & Knoll, 1987) in which they presented GT as an alternative to punishment techniques, and McGee, Menolascino, Hobbs, and Menousek (1987) published the book *Gentle Teaching,* which has come to be regarded as the clearest exposition of the philosophy and practice of this approach. Since then, a host of articles and summaries about GT have appeared (e.g., Aylott, 1991; Barrera & Teodoro, 1990; Brandon, 1989a, 1989b, 1990; Conneally, 1989; Crowhurst, 1991; J. Jones, Singh, & Kendall, 1990, 1991; R. Jones, 1990; Jordan, Singh, & Repp, 1989; Kelley & Stone, 1989; McCaughey & Jones, 1992; McGee, 1990; McGee & Gonzalez, 1990; McGee & Menolascino, 1991; Paisey, Whitney, & Moore, 1989; Turnbull, 1990).

Assumptions

Bonding. The term *bonding* is most often associated with the relationship that develops between the newborn infant and its mother. For example, Bowlby (1982) has written extensively on the importance of attachment between mother and child, and research evidence has suggested that this early attachment can influence later development (Matas, Arend, & Sroufe, 1978; Sroufe, 1983). McGee uses the term more loosely to describe relationships in general that are meaningful and important to both parties and that are based on affection, trust, and respect. The ability to respond to another individual affectionately is regarded as being absent in many devalued people. "Bonding either has never existed or has been diminished for any number of personal, social or psychological reasons" (McGee, Menolascino, Hobbs, & Menousek, 1987, p. 18).

It is therefore necessary for the gentle teacher to demonstrate that human interactions and relationships can be rewarding, and it is this reward training that leads to bonding. "The first pedagogical objective in GT is reward teaching—systematically and consciously teaching the goodness and reinforcing power inherent in verbal and tactile praise" (McGee, 1985a, p. 8).

Although the first step in the development of bonding is dependent upon the attitude and behavior of the caregiver, the proponents of GT point out that human relationships are reciprocal in nature and are rarely one-sided. Therefore, until the learner begins to reciprocate the valuing and affec-

tion, the goal of GT has not been met. The following quote by McGee, Menousek, and Hobbs (1987) illustrates the mechanisms involved in the development of bonding:

> The caregivers . . . prevent aggressive and/or self-injurious behaviors as much as possible and continuously redirect people toward tasks or interactions that are used as vehicles for teaching the value of human presence and reward in a gentle, tolerant, respectful manner. As the minutes wear on, people with special needs begin to respond better to the tasks and interactions. This is good, but not the primary focus. This improved redirectability to on-task participation provides multiple opportunities to teach reward. Gradually people begin to catch on to the meaning of human presence, reward, and participation. Simultaneously, caregivers fade these supports, allowing people with special needs to assume more self-directed control. As this interactional equity sets in and takes hold, bonding begins to emerge. (p. 156)

Communication. Challenging behaviors are viewed as communicative messages through which the learner can indicate distress, discomfort, or anger. McGee, Menolascino, Hobbs, and Menousek (1987) stated that "The emergence of disruptive or destructive behaviors is often the person's way of communicating with an incomprehensible and non-responsive world" (p. 18). Persons with mental retardation are regarded as being more at risk to develop challenging behaviors because their ability to communicate effectively is often hampered by a combination of psychological, sensory, neurological, and physical difficulties, as well as societal prejudice and diminished social support.

Value. People with mental retardation do not need to prove their worth; their value is inherent in simply being human. This principle is based on the idea that human value is not contingent on deeds done or on the presence of appropriate social behavior. In many ways, modern society values people according to their abilities and achievements. As a result, the acquisition of skills is seen as being of major importance in the "normalizing" of individuals with mental retardation within society.

Although GT supports the development of personal competencies, it rejects the assumption that a person's value is dependent upon his or her ability to behave in a socially acceptable manner.

> It is held that every person's value is intrinsic, simply because she or he is a unique human being. This value does not depend on any other characteristics or measurements—neither cognitive nor behavioral. This value must be felt in spite of the person's maladaptive behaviors. (McGee, Menousek, & Hobbs, 1987, p. 157)

Thus, McGee regards the development of solidarity between the caregiver and the learner as being of prime importance in maintaining dignity and respect for an individual. "A posture of solidarity accepts the inherent dignity of each person as a human being" (McGee, Menolascino, Hobbs, & Menousek, 1987, p. 37).

TECHNIQUES OF GENTLE TEACHING

A number of specific techniques are used in GT. These are based on the philosophy of GT and are meaningless without this "humanizing and liberating posture" (McGee, Menousek, & Hobbs, 1987, p. 163). They are not prescribed as a rigid set of procedures, but rather as a group of techniques from which the caregiver can select the most appropriate strategy.

A central issue in the interaction between caregiver and learner is that bonding is said to occur while a task is being taught. This is different in emphasis than the traditional task-instruction session, in that the task is regarded primarily as a "vehicle" or a "bridge across which interactions gain their meaning" (McGee, 1985a, p. 9). In other words, the task itself is felt to be of little importance when compared to the use of that task

as a method of teaching the rewarding value of human presence and participation.

McGee (1985c) outlines nine specific techniques he has adapted from the experience of working with "over 600 persons with both mental retardation and severe behavioral problems" (p. 13). These specific strategies are ignore-redirect-reward, interrupt-ignore-redirect-reward, environmental control, stimulus control, errorless learning, shaping and fading, teaching quietly, assistance envelope, and reward envelope (McGee, 1985c, p. 13). McGee states that although these techniques are not new and have been used by other caregivers for years, "what is new is that mixtures of these techniques enable us to avoid using punishment and, more importantly, teach interactional control which leads to bonding" (p. 13). He further emphasizes that it is not necessary for caregivers to use each of these techniques in a systematic order, but that they should base their teaching on their own judgment of the moment-to-moment changes in the learner's behavior. Indeed, according to McGee, one of the defining characteristics of GT is that a rigid, menu-like approach to programming is unlikely to be flexible enough to meet the needs of a highly demanding and challenging client group. Thus, "gentle teaching techniques are not 'recipes' which guarantee the effective teaching and management of mentally retarded individuals with severe behavioral/emotional problems. They comprise a group of techniques which are effective in various combinations and which lead to interactional control" (McGee, 1985c, p. 14).

THE STRENGTHS OF GENTLE TEACHING

Wide Focus

One of the inherent strengths of GT is that it aims to improve the quality of life of people with mental retardation by concentrating on wider ecological variables (e.g., environmental and interpersonal factors) rather than focusing specifically on maladaptive behaviors. Behavioral practitioners have often been criticized for concentrating on the elimination or reduction of specific maladaptive behaviors without taking other factors into account. In an early paper, Willems (1974) stated,

> Applied behavior modification is an astonishingly simple and successful technology of behavior change. However, its precision and objectivity depend, in large part, upon its application to single dimensions of behavior, one at a time. The questions of larger and unintended effects within interpersonal and environmental contexts and over long periods of time beg for evaluation and research, because lessons learned in other areas suggest that we should always be sensitive to "other" effects of single-dimensional intrusions. (p. 155)

In the following years, considerable attention became focused on the inclusion of an ecological perspective within behaviorism, and increasing numbers of behavioral analyses were conducted that included this ecobehavioral perspective (e.g., Dumas, 1986; Pyles & Bailey, 1990; Rogers-Warren, 1984; Rogers-Warren & Warren, 1977; Sanders, Dadds, & Bor, 1989).

An early example of how such a wide focus can help in the interpretation of behavioral data was provided by Martin (1977), who tested the relative effectiveness of three kinds of feedback on the performance of simple tasks by children who were chronically ill. The three forms of feedback were ignoring, reprimanding, or praising. The results showed that the children worked hardest when they were reprimanded. Taken on its own, this finding might suggest that reprimanding is the most appropriate form of feedback to teach simple tasks. By taking a wider focus, however, Martin (1977) obtained more data that served to limit the generalization of this finding. In a probe following each session, it was noted that the children never chose to play the game or perform the task on which they had been reprimanded in the previous session. Interestingly, in an earlier study, Redd, Morris, and Martin (1975), using the same three forms of feedback, scheduled different adults to deliver each consequence. After each session, when the children

were given a choice of which adult to play with, they never chose the adult who had reprimanded them during the prior session.

Despite the general inclusion of ecological variables within behavioral analysis, it appears the field of severe challenging behavior may have been particularly slow to adopt this perspective. Lutzker (1990), for example, stated that "few studies have examined the ecological context of serious behavior problems" (p. 500) and suggested that "although this (ecological) approach appears in the literature with somewhat more frequency than in the past, the mode unfortunately remains a more narrow focus on the target behavior" (p. 499). In view of these perspectives, GT emphasizes the importance of meaningful relationships in the lives of people with mental retardation and attempts to facilitate the development of close relationships between clients and caregivers. Repp (1990) recognized the contribution of GT as follows:

> McGee has emphasized the role of the caregiver more than any of the rest of us have. Yes, we look at attention, escape and so forth, but McGee is asking us to look at far more complex social interactions than those. (p. 20)

Gentle teaching also attempts to examine environmental variables that may contribute to the presence or absence of inappropriate behavior. For example, two specific GT techniques are environmental control and stimulus control. These procedures encourage the caregiver to organize the physical environment so the probability of the occurrence of maladaptive behaviors is reduced. Caregivers are therefore required to take account of variables such as seating arrangements, heat and light, task presentation, arrangement of task materials, and so forth. According to McGee (1985a),

> a basic postulate in gentle teaching is that considerable change in behavior can result from a focus on antecedent conditions as opposed to consequences. . . . Antecedent control consists primarily of arranging the environment to increase the probability of appropriate behavior occurring by decreasing the probability of the occurrence of inappropriate behaviors. (pp. 7–8)

By widening its scope to include these wider ecological variables, GT is less likely to suffer from the unintended side effects alluded to in Willem's (1974) article, and is also likely to increase generalization and maintenance of behavior change when compared to traditional behavior management techniques. In this way, the client's overall quality of life is likely to be improved in ways other than the elimination or reduction of challenging behaviors.

Mutual Change

In outlining an approach aimed at improving the relationship between caregiver and client, McGee and his colleagues inferred that successful relationships require input and commitment from both parties, and that successful relationships are rarely one-sided. In this way, GT is targeted at caregivers as well as individuals with learning difficulties. According to McGee (1990):

> gentle teaching sees dyadic, or two-way, change as critical—in order to lessen aggression, self-injury or stereotyped behavior, both the caregiver and the mentally handicapped person must mutually undergo change. Gentle teaching aims to create bonded relationships within which this change occurs. (p. 69)

McGee's emphasis on caregiver change is one of GT's particular strengths, especially in light of research examining the behavior of staff members working with persons with mental retardation. For example, evidence suggests that increasing the staff–client ratio does not result in an increase in the level of staff-initiated client contacts (Dalgleish & Matthews, 1981; Harris, Veit, Allen, & Chinsky, 1974) and may in fact decrease the level of staff–client interaction (Mansell, Felce, Jenkins, & deKock, 1982). Evidence also suggests that clients perceived by staff as more attractive and intelligent receive a greater amount of staff attention (Daily, Allen, Chinsky, & Veit, 1974), and older, more often institutionalized clients receive less attention (Paton

& Stirling, 1974). Also, staff members have a tendency to ignore clients when they are behaving appropriately and to respond more often when clients are behaving inappropriately (Cullen, Burton, Watts, & Thomas, 1984; Felce et al., 1987; Warren & Mondy, 1971). Woods and Cullen (1983) indicated that staff behavior is more often negatively reinforced by senior staff members than it is positively reinforced by the gradual but often barely perceptible changes in the behavior of persons with mental retardation.

In emphasizing the process of mutual change in both client and caregiver, GT aims to reinforce staff members for their interactions with clients; as a result, they may succeed in overcoming many of the problems outlined above. It is assumed that through this process of mutual change, both the client and caregiver will benefit from the relationship, and the quality of life will improve for both parties.

CRITICISMS OF GENTLE TEACHING

No Clear Definition

A reader who searches for a clear definition of GT is apt to find the available literature full of a restatement of some central issues relating to the importance of bonding between caregiver and learner and of caregivers assuming a "humanistic and liberating posture" (e.g., McGee, Menolascino, Hobbs, & Menousek, 1987, p. 26). Unfortunately, precise operational definitions of these central concepts are absent, and the reader is left with a description of a number of quasi-behavioral techniques without specific guidance on how to incorporate these techniques into an intervention plan. This difficulty is exacerbated by a rather cumbersome and excessive use of jargon by the proponents of GT.

One of the reasons for the lack of clarity in the GT literature is that as an evolving philosophy, it inevitably includes modifications and apparent contradictions as it grows. For example, in early texts McGee recommended that caregivers not interact in any way with learners who are engaging in challenging behavior. Thus, McGee, Menousek, and Hobbs (1987) recommended that caregivers "do not speak to or look at people as they engage in maladaptive behaviors" (p. 164). In contrast, in his 1990 paper, McGee stressed the importance of the caregiver providing "encouraging words, gazes, pats on the back and smiles. These signals are given unconditionally and are not related to any current behaviors whether adaptive or maladaptive" (p. 68). Similarly McGee (1990) says GT "requires changes in carers and stresses warmth, authenticity and genuineness" (p. 71), but does not address the issue that for many difficult staff–client interactions, a choice may be needed between expressing "warmth" and expressing "authenticity."

The inevitable changes in any psychological theory as it evolves do not necessarily suggest a weakness, and indeed the ability to modify aspects of a procedure in the light of feedback may represent a considerable advantage in any developing philosophy. With GT, however, the process is more difficult and seems to represent less a modification of existing theory and more a series of fundamental changes in direction. Careful reading of the GT literature reveals a number of surprising changes of emphasis. As mentioned earlier, a number of papers by Menolascino and McGee appeared in the late 1970s and early 1980s that frequently alluded to the appropriateness of controlling behavior using both behavior management and psychoactive medication (McGee, 1979; McGee & Hitzing, 1978; Menolascino & Egger, 1978; Menolascino & McGee, 1981). In the series of 1985 papers published in *Mental Handicap in New Zealand,* the importance given to behavior management and psychopharmacology was reversed, and no reference was made to any of the earlier papers by Menolascino or McGee. Two years later, when the book on GT was published (McGee, Menolascino, Hobbs, & Menousek, 1987), no references to the series of papers published in 1985 appeared. Similarly, in both the 1983 paper and the 1985 chapter, the establishment of "interactional control" was regarded as central. This emphasis was later dropped, and interactional control did not appear as a central concept in any of the later formulations.

There are other, more dramatic changes evident in recent formulations. Perhaps the most important of these was the omission of the term *bonding*. This word did not appear at all in McGee's 1990 paper. In a workshop given in England by Hobbs (one of the coauthors of the 1987 book), he explained that the term had caused so much confusion that it was now being replaced by the concept of "interdependence" (Hobbs, 1990). This process develops because of what McGee and Menolascino (1991) called "unconditional valuing." According to McGee (1990), this refers to "the interactions between carers and the cared-for through frequent authentic value giving. There is also emphasis given to eliciting reciprocation, warm assistance, and protection without restraint" (p. 69). This may or may not be identical to what was previously termed bonding, but without a clearer definition it is impossible to be sure.

There are, therefore, two related difficulties with GT: (a) The central tenets of GT are not operationally defined, and (b) the emphasis placed on these tenets seems to change frequently. This results in difficulties in training students to become gentle teachers and difficulties in the scientific evaluation of GT. This latter problem has led to some discussion as to the efficacy of GT in clinical settings.

Gentle Teaching Is Ineffective

There have been a number of contradictory reports of the effectiveness of GT. McGee (1985b) reported that GT was successful with over 600 clients at the Nebraska Psychiatric Institute and other venues including group homes, sheltered workshops, and clients' own homes. The client group included individuals with mild and severe mental retardation (who exhibited problems such as aggression and self-injurious behavior) as well as clients diagnosed as depressed or schizophrenic. The methodological limitations of McGee's early research have been described by several authors (Jordan et al., 1989; Mudford, 1985; Singh, 1983). These criticisms point to the fact that McGee's treatment results were simply informal observations, descriptions, or videos of pre- versus posttreatment behavior and that his experimental design did not include either baseline or control conditions. As a result of these methodological deficiencies, it is impossible to conclude that posttreatment changes in behavior were caused by GT when the results could have been influenced by any number of extraneous variables.

There have been several recent attempts to evaluate GT systematically (Barrera & Teodoro, 1990; J. Jones et al., 1990, 1991; Jordan et al., 1989; McGee & Gonzalez, 1990; Paisey et al., 1989). These evaluations have had mixed results. Jordan et al. (1989) studied the stereotyped behavior of 3 persons with severe mental retardation (aged 21, 28, and 7 years) and compared the effectiveness of GT, a reductive procedure known as visual screening, and a task-training condition in decreasing the rate of stereotyped behavior. Visual screening is a punishment procedure in which a screen is placed in front of the client's eyes contingent upon the occurrence of maladaptive behavior (McGonigle, Duncan, Cordisco, & Barrett, 1982). Jordan et al. measured both the rates of stereotyped behavior and of what they termed bonding behavior (smiling, physical approach, touching, hugging, and eye contact). They found that visual screening was more successful than GT in reducing the subjects' stereotyped behavior and that GT was more successful than the task-training condition for 2 of the 3 subjects. For the 3rd subject, levels of stereotyped behavior were found to increase during the GT component of the intervention. Bonding did not occur more often under the GT condition.

In the Paisey et al. (1989) study, three reductive procedures (GT, differential reinforcement of incompatible behavior plus interruption, and graduated guidance) were administered to 2 men with profound mental retardation who exhibited self-injurious head hitting. Following no-demand and instructional-demand baseline sessions, the three intervention packages were balanced across 18 30-min training sessions. The authors found significant differences between the three packages in rates of target response suppression, with effects on collateral behaviors and acquisition of appropriate behaviors for GT being the least effective.

However, there are certain methodological prob-

lems with both of these studies. For example, Jordan et al. (1989) used an alternating treatments design to evaluate the effectiveness of GT and visual screening. Only one of the main GT strategies was used during episodes of stereotypy (ignore-redirect-reward) when it may have been more successful to use the interrupt-ignore-redirect-reward strategy (McGee, 1985c). More important, because GT is dependent on the building of a close relationship between caregiver and client, it may have been inappropriate to use an alternating treatments design in which each client has sessions with two therapists who alternate the roles of observer and therapist from session to session and in which session content is randomly changed from GT to visual screening to baseline control. Gentle teaching is not an approach that can be switched on and off at random according to the guidelines of behavioral single-case methodology. Finally, the length of the alternating treatments phase was about 8 days, during which time clients were exposed intermittently to sessions of either the baseline control condition, visual screening, or GT. It is unlikely that such a design would leave adequate time for the development of bonding between therapist and client.

The Paisey et al. (1989) paper can be criticized for the small number of subjects used ($N = 2$) and the weaknesses of the alternating treatments design, as well as the time-limited nature of the interventions. In addition, their procedure implied that there were large differences in the density and type of reinforcing stimuli among the three conditions.

Some of these methodological problems have been addressed in more recent evaluations of GT. Barrera and Teodoro (1990), using a six-phase reversal design, evaluated the effectiveness of GT in reducing the self-injurious behavior of a 33-year-old man with profound mental retardation. Self-injury did not decrease significantly with the use of GT and was reduced to its lowest levels only when restraints, edible reinforcers, and isolation between sessions were used in one of the experimental phases.

J. Jones et al. (1990) evaluated the comparative effectiveness of GT and visual screening on the self-injurious behavior of 2 people with profound mental retardation. In this study, however, the authors used the interrupt-ignore-redirect-reward process rather than the ignore-redirect-reward strategy that had been used in the Jordan et al. (1989) study. J. Jones et al. (1990) found that neither GT nor visual screening was effective in reducing the self-injurious behavior of 1 subject, but with the other subject, the GT package "was successful in treating Jeff's self-injury to near-zero levels" (p. 227). With this subject, the visual screening procedure was also effective in reducing self-injury to low levels, although there was a small increase in self-injury in the last session in which it was used. Gentle teaching was regarded as the most successful procedure with this subject, and was successfully continued in the subsequent two phases of the study. This design was replicated in a later study (J. Jones et al., 1991) with 1 subject, and opposite results were found. In this study GT and visual screening were both effective in reducing self-injury compared to baseline levels, but with the GT package there was a steady increase in head slapping during its use. Visual screening was regarded as the most effective procedure and was successfully continued in the subsequent two phases of the study. Thus, two of these studies (J. Jones et al., 1990, 1991) used alternating treatment designs with the inherent difficulties mentioned earlier. As J. Jones et al. (1990) commented, "in future studies, researchers might consider using a multiple baseline across settings (or subjects) design to evaluate the effectiveness of GT without having the confound of an aversive procedure" (p. 227).

A study by the proponents of GT (McGee & Gonzalez, 1990) attempted to evaluate GT in a more systematic and scientific way than reported previously. In this study GT was compared to a baseline phase, during which caregivers carried out "routine behavioral intervention programs" (p. 224) according to the subjects' individual program plans. Baseline and intervention sessions were videotaped and coded according to two detailed coding systems—the Caregiver Interactional Observation System (CIOS) and the Person's Interactional Observation System (PIOS). Gentle teaching was found to be effective both in reducing the amount of

challenging behavior (aggression, self-injury, and withdrawal were reduced on average by 74%) and by changing the nature of remaining behavioral difficulties. The authors claimed "clinical observation indicated that the remaining behavioral difficulties were non-harmful and non-disruptive" (McGee & Gonzalez, 1990, p. 246). Changes were also noted in the behavior of caregivers so that value-centered interactions were increased and dominative interactions decreased.

The major weakness of this study was that it employed an AB design, thus making it difficult to attribute observed improvements in behavior to GT. However, follow-up observations were taken for 1 subject who was observed interacting with a caregiver trained in GT and with another individual untrained in GT. This design approached an ABA design in that the use of an untrained caregiver resembled baseline conditions. The results of this case showed that while interacting with the trained caregivers, the gains observed in the intervention phase were maintained, compared to interactions with the untrained caregiver in which an increase in challenging behavior (to baseline level) resulted.

During the baseline phase each subject underwent "routine behavioral interventions" (p. 224), implying that the reported improvements in behavior during the GT phase were over and above those of the ongoing behavioral programs. It is unfortunate, therefore, that these behavioral interventions were not specified, because these results lend support to McGee's claim that the effects of GT are due to more than behavioral manipulations.

It appears that much of the research carried out to date on the effectiveness of GT has been a response to McGee's controversial claim that GT is universally effective. This claim is clearly false, but it is likely that future research will confirm the findings of J. Jones et al. (1990) that GT is effective for some individuals and ineffective for others.

As with the experimental analysis of other nonaversive interventions, future research might be more productive if it moved away from questions regarding overall treatment effectiveness towards a detailed analysis of why specific treatments work for some individuals but seem to be ineffective for others (R. Jones, 1991). Clearly the use of a detailed functional analysis will be important to establish whether GT is more effective with behavior maintained by one function (e.g., attention) rather than another (e.g., self-stimulation).

Thus, although the above papers have attempted to compensate for the lack of scientific rigor in previous evaluations of GT by designing complex, well-controlled studies, a number of problems still remain. These problems probably reflect the fact that as it stands, GT is extremely difficult to evaluate because its central concepts are not operationally defined, and its procedures are inherently flexible. Thus, the most accurate conclusion from the data currently available is that the efficacy of GT has yet to be demonstrated conclusively.

Future research on the effectiveness of GT should be conducted using multiple baseline or group designs and allowing sufficient time in each phase for therapeutic effects to become established. These might be measured in months rather than days. It would also be useful to monitor any response covariation by measuring a range of collateral behaviors, including the concurrent monitoring of additional appropriate and inappropriate behaviors. It may be of particular interest to monitor behaviors associated with increases in "interdependence." These might include increases in eye contact, friendly comments, and turn taking (McGee & Gonzalez, 1990, p. 243).

Gentle Teaching Misinterprets Other Research

The first chapter of *Gentle Teaching* (1987) is devoted to arguing against the use of punishment techniques in the reduction of challenging behavior. The authors certainly do not mince words in attacking those researchers who have employed such practices. For example, readers are informed that

> Like torturers, some behavior modifiers are trained in the nuances of pain and punishment. . . . Torturers are protected by authoritarian governments and behavior modifiers are protected by human rights committees. . . . The end result of both torture and punishment is the same—creation of the feel-

> ing that the "programmer" is omnipotent and omniscent and a reduction of the person to a state of total mortification, humiliation and degradation. (McGee, Menolascino, Hobbs, & Menousek, 1987, p. 25)

Given the strength of this language, it is rather unfortunate to find that, as pointed out by Mudford (1985), the chapter contains inaccurate information concerning the work of several researchers. For example, it is stated that "strange practices such as squirting ammonia in the face . . . are periodically introduced as innovative practices" (McGee, Menolascino, Hobbs, & Menousek, 1987, p. 22). A number of references are cited in support of this assertion (Gross, Berier, & Drabman, 1982; Reilich, Spooner, & Rose, 1984; Tanner & Zeiler, 1975). What is noteworthy, as Mudford (1985) points out, is that none of these references refer to the squirting of ammonia in the face. In fact, two of the papers involved the use of a water mist sprayed in the client's face (Gross et al., 1982; Reilich et al., 1984), and the third involved placing a crushed ammonia capsule under the client's nose (Tanner & Zeiler, 1975). There are many other examples of inaccurate and unfair reporting in McGee's writings. This has led Mudford (1985) to assert that "the ill researched, vitriolic attack on mainstream behavior analysts/therapists . . . is definitely incorrect and possibly libellous" (p. 268). The issue here is not whether behaviorists engage in cruel and inhumane practices, but whether these reports are accurate.

If the proponents of GT can be shown to have difficulty in the accurate reporting of the work of other researchers, this inevitably raises questions regarding their ability to report their own work accurately. This is particularly unfortunate given the lack of objective data and other methodological limitations of McGee's own research, as outlined earlier.

Gentle Teaching Is an Aversive Intervention

Although GT is regarded as the definitive nonaversive procedure for the reduction of challenging behavior (Brandon, 1990), some authors have suggested that in some contexts it may regarded as aversive. For example, Emerson (1990) proposed that "nominally non-aversive strategies such as 'gentle teaching' may be highly aversive to people whose self-injury is motivated by a desire to escape from contact with others" (p. 94). Barrera and Teodoro (1990) found that "our participant's attempts to resist and terminate sessions, as well as to escape from the training area in most phases, suggest that this approach acquired undeniable aversive properties" (p. 210).

At the center of this argument is the debate surrounding the definition of punishment. Axelrod (1987) proposed that many procedures labeled differential reinforcement of other behavior (DRO) can be regarded as punishment, if the postponement of reinforcement is regarded as an aversive consequence. Thus, if social praise is delivered contingent on the absence of stereotyped behavior for a specified time period, this can be termed DRO—a reinforcement procedure. A different interpretation, however, would regard the occurrence of stereotyped behavior as being punished by the postponement of social praise—a punishment procedure known as response cost. O'Brien (1989, p. 53) regards these distinctions as mere "word games" and proposes an analysis based simply on changes in the rate of the behavior. "Suffice it to say that when the target behavior is a maladaptive one and treatment results in a decrease of that behavior, the treatment methods may best be analyzed as punishment, regardless of what the authors name it" (p. 53). According to this interpretation, GT would be classified as a punishment procedure.

Ironically, McGee's own writings seem to support the interpretation of GT as potentially aversive. For example, McGee (1985c) stated that at the beginning of the process of GT "the person will display behaviors which obviously indicate that the person does not want anything to do with the caregiver—screaming, hitting, biting, kicking, scratching, avoiding, etc." (p. 13). The caregiver, however, is advised to ignore these behaviors and continue with the process of GT. The justification for this approach seems indistinguishable from "the-end-justifies-the-means" rationale that McGee

claims is used by mainstream behaviorists to justify the use of aversive procedures.

Gentle Teaching Can Be Potentially Dangerous

As outlined in the previous section, Emerson (1990) suggested that GT may be an aversive strategy to some clients, depending upon their motivation for engaging in challenging behavior. It is therefore more realistic to view challenging behavior as having different forms and functions for different individuals (Repp, Felce, & Barton, 1988). In assuming that all individuals who engage in challenging behavior do so in an attempt to communicate unhappiness and frustration, GT may not only be aversive to some clients, as suggested by Emerson, it may also be dangerous. To take self-injurious behavior as an example, there is evidence to suggest that self-injury may occur as a response to pain resulting from untreated medical conditions (Gunsett, Mulick, Fernald, & Martin, 1989) or as a direct consequence of frontal lobe epilepsy (Geyde, 1989). Both of these possibilities require extensive medical investigations as part of an overall functional analysis prior to any treatment intervention. Making untested assumptions about an individual's challenging behavior resulting from a lack of bonding or a lack of meaning in relationships could result in the withholding of essential medical treatment for an unacceptable length of time. This criticism is not exclusive to GT, however, as the practitioners of any therapy approach (even behavior analysis) could be overly focused (or biased) on one type of treatment and miss an alternative perspective.

Gentle Teaching and Applied Behavior Analysis

A number of authors have criticized GT because it is presented as an alternative to more traditional methods of behavior management when many of the techniques used are identical to those implemented in behavior analysis. For example, the nine specific techniques outlined earlier are well-documented behavioral interventions for reducing inappropriate behavior (Cooper, Heron, & Heward, 1987). In addition, the success of the caregiver has been attributed not to bonding per se but to the influence of stimulus control, modeling, positive practice, and a form of graduated exposure (R. Jones, 1990). McGee has had an uneasy relationship with applied behavior analysis. At times he is very critical of traditional behavioral approaches:

> John McGee has started a crusade against the use of behavioural methods to treat people with mental handicap with disturbed behaviors and, in particular, the use of aversive techniques. . . . during an interview on Canadian television, John McGee declared that behaviourism is sinful. (Conneally, 1989, p. 5)

Other commentators have quoted similar assertions:

> McGee is far from gentle about existing systems of care. The culture around people with severe behavioural disorders is a culture of death. The technology of that culture is behaviourism that says we are nothing more than sets of stimuli and responses. The goal of life for these technologists is control compliance. (Brandon, 1989a, p. 14)

Similarly, R. Jones (1990), writing about his responses to a GT workshop run by McGee (McGee, 1989), stated the following:

> Early in the workshop McGee presented us with a vision of behaviourism as an evil, soul-destroying activity based on punishment and fear. He then presented gentle teaching as a liberating, democratic and valuing activity which existed in opposition to the behavioural approach. I was starting to feel that I was at a sales presentation and that the behavioural approach which I have believed in for years was being caricatured by someone who didn't fully understand it. (R. Jones, 1990, p. 9)

In some of his writings, however, McGee appears to be more gentle concerning behaviorism:

> Behavioral analysis is a neutral tool, as is all technology. The humanizing value of any

> technology, if it is to have one, must arise out of our personal values and beliefs, that is, our posture towards ourselves and others. Like any tool in human hands, behaviorism can be used to bring people into submission or raise them to a liberated state. (McGee, Menousek, & Hobbs, 1987, p. 152)

The proponents of GT, although acknowledging that many of the techniques are based on behavioral principles, claim the essential element that defines GT is the posture or attitude assumed by the caregiver while carrying out these specific techniques. This posture of solidarity, interdependence, and respect is regarded as a central mediating variable in the successful reduction of inappropriate behavior. In explaining the importance of staff flexibility, McGee (1989), reporting data on staff attributes gathered over a 5-year period in the Nebraska program, stated that the attributes that characterize the best gentle teachers are a "sense of humour," "a sense of playful optimism," and a flexible approach. McGee reported that these characteristics were more relevant than attributes such as the number of years of experience working with people with mental retardation, professional background, or accumulated years of service. It is easy to see that these attributes are desirable and indeed essential for the successful implementation of such a fluid, sensitive system. What is noteworthy, however, is that this list of attributes closely mirrors the characteristics that Foxx (1985) outlined as distinguishing a behavioral technologist from a behavioral "artist." Foxx (1985) cites "having a bizarre sense of humour," "liking people," "being optimistic," and possessing a "perceptive sensitivity" to be among the attributes that distinguish the best behavior modifiers. Similarly, although McGee, Menolascino, Hobbs, and Menousek (1987) suggested that the emphasis on bonding distinguishes GT from the behavioral approach, Foxx (1985) had previously presented an account of bonding in terms of positive reinforcement and emphasized the importance of noncontingent reinforcement in terms very similar to those subsequently used by McGee, Menolascino, Hobbs, and Menousek (1987).

It seems likely, therefore, that although McGee and colleagues claim there is a fundamental difference between GT and the behavioral approach, a close inspection suggests that there are many areas of overlap, and the differences that do emerge are more philosophical than procedural. These similarities have been noted by several authors (e.g., R. Jones, 1990; Mudford, 1985).

CONCLUSIONS AND FUTURE DIRECTIONS

Since the advent of GT in 1985, it has been subject to considerable criticism. The major criticisms are that it (a) consists primarily of mainstream behavioral procedures that have benefited from a new marketing campaign (Glynn, 1985), (b) is conceptually loose and ill defined, (c) is largely ineffective (Jordan et al., 1989; Paisey et al., 1989), and (d) is potentially an aversive (Emerson, 1990) and perhaps even dangerous approach. The proponents of GT have argued that mainstream behavior modification is authoritarian, rigid, and coercive, and is an approach akin to torture.

On the basis of these criticisms, it seems that applied behavior analysis and GT are two polarized approaches based on fundamentally different philosophies. However, a more detailed analysis suggests considerable overlap between the two, and the criticisms of each perspective are based primarily on a misreading of the philosophy and practice underlying the alternative approach.

Although a number of criticisms of GT appear to be valid, there are undoubted advantages, as outlined earlier. Therefore, it is inappropriate to dismiss GT out of hand, especially given the need for further empirical research to examine its effectiveness. Similarly, although it is true that in some cases behavioral principles have been applied in a reductive and aversive manner, there are new developments in the field of applied behavior analysis that make the inappropriate application of aversive interventions less likely. For example, there is already evidence that the increasing use of functional analysis results in more appropriate matching of interventions to the needs of the learner (Repp et al., 1988). In addition, a greater understanding of the differences between contingency-shaped and

rule-governed behavior has increased our understanding of the communicative basis of many inappropriate behaviors.

Stripped of its philosophical overtones, there are three central concepts underlying GT when viewed from a behavioral perspective. These concern the importance of wider ecological variables in the analysis of inappropriate behavior (Pyles & Bailey, 1990; Rogers-Warren, 1984), the importance of the personal characteristics and behavior of the caregiver (Felce et al., 1987; Foxx, 1985; Woods & Cullen, 1983), and the contribution of noncontingent reinforcement to the elimination of challenging behavior (Bradshaw & Szabadi, 1988; Cataldo, Ward, Russo, & Riordan, 1986; Ney, 1973; Tierney, McGuire, & Walton, 1979).

It may therefore be more productive for the proponents of both GT and applied behavior analysis to recognize that much can be gained from adopting some of the positive aspects of the other's approach. A synthesis of these two approaches may lead to a stronger and more flexible methodology than either can supply alone. It is important that the need for objective, data-based evidence for treatment effectiveness is not lost in an evangelical crusade to treat people decently. It is, however, equally important that discussions of the value of GT rise above the rhetoric, misinformation, and personal criticism that have characterized much of the recent debates concerning the use of nonaversive interventions.

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